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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/063,803	05/15/2002	Charles H. Honeyman	H-307	2740
26245	7590	01/07/2004	EXAMINER	
DAVID J COLE E INK CORPORATION 733 CONCORD AVE CAMBRIDGE, MA 02138-1002			CHOI, WILLIAM C	
			ART UNIT	PAPER NUMBER
			2873	

DATE MAILED: 01/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/063,803	Applicant(s) HONEYMAN ET AL.	
	Examiner William C. Choi	Art Unit 2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-135 is/are pending in the application.
4a) Of the above claim(s) 107-135 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-68, 101-103 and 106 is/are allowed.
- 6) ☒ Claim(s) 69, 76, 84, 87, 88, 91, 92, 99, 100, 104 and 105 is/are rejected.
- 7) ☒ Claim(s) 70-75, 77-83, 85, 86, 89, 90 and 93-98 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>0103,0203</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Claims 107-135 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 1003.

Priority

Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged.

Information Disclosure Statement

The information disclosure statements filed 1/13/2003 and 2/13/2003 fail to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 69, 76, 84, 87, 88, 91, 92, 99, 100, 104 and 105 rejected under 35 U.S.C. 102(b) as being anticipated by Gordon II et al (U.S. 5,914,806).

In regard to claim 69, Gordon II et al discloses a two-phase electrophoretic medium comprising a continuous phase (i.e. suspension fluid) and a discontinuous phase (i.e. pigment), the discontinuous phase comprising a plurality of droplets, each of which comprises a suspending fluid and at least one pigment particle disposed within the suspending fluid and capable of moving through the fluid upon application of an electric field to the electrophoretic medium (column 1, lines 50-60 and column 5, lines 8-18, Figure 1), the continuous phase surrounding and encapsulating the discontinuous phase, the pigment particle comprising a polymer chemically bonded to the pigment particle (column 2, lines 5-12).

Regarding claim 76, Gordon II et al further discloses wherein the polymer is chemically bonded to the pigment particles (column 3, lines 12-13).

Regarding claim 84, Gordon II et al further discloses wherein the particles comprise carbon black (column 2, lines 13-16).

Regarding claims 87 and 88, Gordon II et al further discloses wherein the polymer comprises charged or chargeable groups comprising carboxylic acid groups (column 3, lines 53-60).

Regarding claim 91, Gordon II et al further discloses wherein the polymer is formed from a methacrylate (column 3, lines 46-52).

Regarding claim 92, Gordon II et al further discloses wherein the polymer is formed from methyl methacrylate (column 3, line 50).

Regarding claim 99, Gordon II et al further discloses wherein at least one electrode is arranged adjacent the medium and would inherently be capable of applying an electric field to the medium (column 5, lines 10-12, Figure 1, "2").

Regarding claim 100, Gordon II et al further discloses wherein the display has two electrodes disposed on opposite sides of the electrophoretic medium (column 5, lines 10-15, Figure 2, "2" and "8") at least one of the electrodes being substantially transparent such that the electrophoretic medium can be viewed through the substantially transparent electrode (column 5, lines 10-12, Figure 1, "2").

Regarding claim 104, Gordon II et al further discloses wherein the electrophoretic medium comprises at least one particle suspended in a suspending fluid (column 5, lines 15-18, Figure 1, "10").

Regarding claim 105, Gordon II et al further discloses wherein the at least one particle and the suspending fluid are encapsulated within a capsule (i.e. "cell") (column 5, lines 8-18, Figure 1).

Allowable Subject Matter

Claims 1-68, 101-103 and 106 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to teach a combination of all the claimed features as presented in claims 1-31: an electrophoretic medium as claimed, specifically having from about 1 to 15 per cent by weight of the pigment of a polymer chemically bonded to, or cross-linked around, the pigment particles.

The prior art fails to teach a combination of all the claimed features as presented in claims 32-41: an electrophoretic medium as claimed, specifically having from about 1 to 25 per cent by weight of the carbon black of a polymer chemically bonded to, or cross-linked around, the carbon black particles.

The prior art fails to teach a combination of all the claimed features as presented in claims 42-68: an electrophoretic medium as claimed, specifically wherein the chemically bonded or cross-linked polymer comprises a main chain and a plurality of side chains extending from the main chain, each comprising at least about four carbon atoms.

The prior art fails to teach a combination of all the claimed features as presented in claims 101-103 and 106: a pigment particle for use in an electrophoretic medium as claimed, specifically wherein the pigment particle has a charged or chargeable group bonded to a pigment particle separately from a polymer.

Claims 70-75, 77-83, 85, 86, 89, 90 and 93-98 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to teach a combination of all the claimed features as presented in claims 70-71: a two-phase electrophoretic medium as claimed, specifically wherein the discontinuous phase comprises at least about 40 per cent by volume of the electrophoretic medium.

The prior art fails to teach a combination of all the claimed features as presented in claim 72: a two-phase electrophoretic medium as claimed, specifically wherein the continuous phase comprises a radiation-cured material.

The prior art fails to teach a combination of all the claimed features as presented in claims 73-74: a two-phase electrophoretic medium as claimed, specifically wherein the continuous phase comprises gelatin.

The prior art fails to teach a combination of all the claimed features as presented in claim 75: a two-phase electrophoretic medium as claimed, specifically wherein the polymer is cross-linked around the pigment particles.

The prior art fails to teach a combination of all the claimed features as presented in claims 77-79: a two-phase electrophoretic medium as claimed, specifically wherein the particles have from about 1 to about 15 per cent by weight of the pigment of the polymer chemically bonded to the pigment particles.

The prior art fails to teach a combination of all the claimed features as presented in claims 80-83: a two-phase electrophoretic medium as claimed, specifically wherein the particles comprise a metal oxide or hydroxide.

The prior art fails to teach a combination of all the claimed features as presented in claims 85-86: a two-phase electrophoretic medium as claimed, specifically wherein the carbon black particles have from about 1 to about 25 per cent by weight of the carbon black of a polymer chemically bonded to the particles.

The prior art fails to teach a combination of all the claimed features as presented in claim 89: a two-phase electrophoretic medium as claimed, specifically wherein

Art Unit: 2873

charged or chargeable groups are bonded to the pigment particles separately from the polymer.

The prior art fails to teach a combination of all the claimed features as presented in claim 90: a two-phase electrophoretic medium as claimed, specifically wherein the polymer comprises a main chain and a plurality of side chains extending from the main chain, each comprising at least about four carbon atoms.

The prior art fails to teach a combination of all the claimed features as presented in claims 93-97: a two-phase electrophoretic medium as claimed, specifically having two types of particles differing in at least one optical characteristic and having differing electrophoretic mobilities.

The prior art fails to teach a combination of all the claimed features as presented in claim 98: a two-phase electrophoretic medium as claimed, specifically wherein the droplets are non-spherical.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Choi whose telephone number is (703) 305-3100. The examiner can normally be reached on Monday-Friday from about 9:00 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (703) 308-4883. The fax phone

Art Unit: 2873

number for the organization where this application or proceeding is assigned is (703)
872-9306.

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the receptionist whose telephone number is (703) 308-
0956.

W.C.

William Choi
Patent Examiner
Art Unit 2873
December 24, 2003

A handwritten signature in black ink, appearing to read "Scott J. Sugarman". The signature is stylized with a large, looping "S" and a cursive "J".

Scott J. Sugarman
Primary Examiner